

A new species of the genus *Stenochironomus* Kieffer (Diptera: Chironomidae) from Xianju National Park, Zhejiang Province, China

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Abstract: *Stenochironomus xianjuensis* sp. nov. from Xianju National Park, Zhejiang Province, China, is described. The new species is morphologically similar to *S. koreanus* Borkent, 1984. It can be distinguished from known species in the genus by the following combination of characters: wing with two dark spots surrounding RM and FCu; superior volsella short and small, spatulate, with 4 long setae; inferior volsella elongate, with 3 long setae and a slender terminal spine, posterior margin of tergite IX with 8–10 setae and 8 spines.

Key words: Culicoidea; taxonomy; characters

浙江仙居国家公园狭摇蚊属一新种记述（双翅目：摇蚊科）

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摘要: 记述采自浙江省仙居国家公园的狭摇蚊属 1 新种: 仙居狭摇蚊 *Stenochironomus xianjuensis* sp. nov.。该新种与朝鲜狭摇蚊 *S. koreanus* Borkent, 1984 相似, 主要区别特征是: 新种的翅延 RM 及 FCu 脉间具 2 色斑; 上附器短小, 竹片状, 具 4 根长刚毛; 下附器长条状, 具 3 根长刚毛及端部 1 细长棘刺; 第 8 背板后缘具 8–10 刚毛和 8 根棘刺。

关键词: 蚊总科; 分类; 特征

Introduction

Stenochironomus Kieffer, 1919 is a species-riched genus widely distributed in the world, occurring in all biogeographical regions except Antarctica (Cranston *et al.* 1989). The type species is *Chironomus pulchripennis* Coquillett 1902, designated by Townes (1945) (Spies & Sæther 2004). About 100 species have been described before the present study (Qi *et al.* 2015).

Received 26 September 2016. Published 25 December 2016. Published online 16 November 2016.

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Among them, 12 species were reported from China (Qi *et al.* 2015), in which 5 species of *Stenochironomus* (*S. brevissimus* Qi, 2015; *S. koreanus* Borkent, 1984; *S. linanese* Qi, 2015; *S. nubilipennis* Yamamoto, 1981 and *S. satorui* (Tokunaga & Kuroda, 1936)) have been recorded (Wang 2000; Qi *et al.* 2011, 2015) in Zhejiang province. In the present study, a new species of *Stenochironomus* from Xianju National Park, Zhejiang Province was described based on male imagines collected by sweep-net.

Material and methods

The morphological nomenclature follows Sæther (1980) and the abbreviations of parts measured follow Qi *et al.* (2012). The material examined was mounted on slides following the procedures outlined by Sæther (1969). The type specimen is deposited in the College of Life Science, Taizhou University, China.

Description

Stenochironomus xianjuensis sp. nov. (Figs. 1–5)

Diagnostic characters. The male imago can be distinguished from known species in this genus by the following combination of characters: wing with two dark spots surrounding the RM and FCu; superior volsella short and small, spatulate, with 4 long setae; inferior volsella elongate, with 3 long setae and a slender terminal spine, posterior margin of tergite IX with 8–10 setae and 8 spines.

Male ($n = 3$).

Total length 4.10–4.35 mm. Wing length 2.10–2.40 mm. Total length/wing length 1.80–1.95. Wing length/length of profemur 1.76–1.85.

Coloration. Head yellow, antenna brown; thorax light yellow, postnotum and scutum with brown spots (Fig. 1); abdominal tergites I–III light yellow, tergites IV–VIII and hypopygium brown (Fig. 2); fore femur and tibia brown, apical 1/4 of mid and hind femur brown, basal 1/4 of mid and hind tibia brown, other leg portions light yellow (Fig. 3).

Head. AR 1.30–1.94. Temporal setae 13–16. Clypeus with 16–20 setae. Tentorium 112–170 μm long, 35–50 μm wide. Palpomere lengths (in μm): 38–43, 58–63, 170–210, 110–140, 200–210. L: 5th/3rd 1.00–1.18.

Wing. Wing with two dark spots, one in the base of cells r_{2+3} and r_{4+5} , the distal of cell r and into cell m near cross vein R-M, the other in the base of m_{3+4} and into the cells m , m_{1+2} and cu near cross vein FCu (Fig. 4). VR 1.02–1.06. B 2–3 setae, R with 30–38 setae, R_1 with 27–31 setae, and R_{4+5} with 31–38 setae. Squama with 9–11 setae.

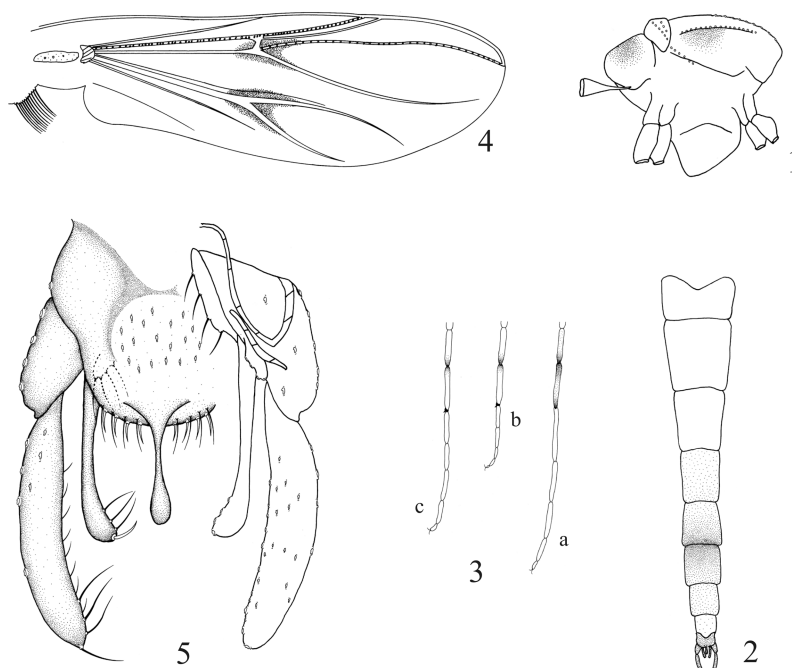
Thorax. Dorsocentrals 8–15, acrostichals 12–18, prealars 4–6. Scutellum with 9–12 setae.

Legs. Scale of front tibia 53–56 μm long, with 2–4 strong setae. Mid and hind tibiae with fused combs, each comb 55–58 μm long. Spurs on mid tibiae 45–50 μm and 55–60 μm long; spurs on hind tibia 40–55 μm and 50–57 μm long. Width at apex of front tibia 60–65 μm , of mid tibia 80–83 μm , of hind tibia 70–80 μm . Lengths (in μm) and proportions for legs in Table 1.

Table 1. Lengths (in μm) and proportions for legs of *Stenochironomus xianjuensis* sp. nov.

	P ₁	P ₂	P ₃
fe	1150–1300	1025–1200	1175–1450
ti	1025–1275	875–1125	1075–1375
ta ₁	1700–1725	625–800	975–1000
ta ₂	825–875	325–450	400–425
ta ₃	675–700	300–450	400–575
ta ₄	600–625	150–225	250–300
ta ₅	225–250	75–100	100–125
LR	1.39–1.48	0.68–0.71	0.80–0.83
BV	1.74–1.79	2.91–2.95	2.71–2.73

Hypopygium (Fig. 5). Anal point 102–140 μm long, 50–80 μm wide at base, 20–30 μm wide at apex, apex of anal point swollen and rounded. Tergite IX with 19–23 long setae medially, posterior margin of tergite IX with 8–10 setae and 8 spines. Phallapodeme 73–93 μm long; transverse sternapodeme 37–45 μm long. Gonocoxite 150–180 μm long. Superior volsella short and small, spatulate, 20–32 μm long, 10–25 μm wide, with 4 long setae. Inferior volsella elongate, 180–200 μm long, with 3 long setae and a slender terminal spine. Gonostylus 210–240 μm long, with 10–12 setae along inner margin in distal 1/2. HR 0.71–0.82, HV 1.71–1.97.



Figures 1–5. *Stenochironomus xianjuensis* sp. nov. ♂. 1. Thorax; 2. Abdomen; 3. Legs (a. Front leg; b. Mid leg; c. Hind leg); 4. Wing; 5. Hypopygium.

Holotype. ♂, **China**, Qikeng Village, Xianju National Park, Xianju County, Zhejiang Province, 25-V-2016, sweeping net, Xin QI. **Paratypes.** 2♂, same as the holotype.

Etymology. The species epithet is named after the type locality, using the Latin suffix *-ensis*, denoting place of origin.

Remarks. The species is close to *S. koreanus* Borkent, 1984 in the structure of the hypopygium. They can be separated by the wing spots. The wing of *S. xianjuensis* sp. nov. has two dark spots surrounding the RM and FCu, while the wing of *S. koreanus* Borkent is transparent, without any pigmentation.

Acknowledgements

Financial support from the National Natural Science Foundation of China (31301908, 31272284 and 31201739), the Zhejiang Provincial Natural Science Foundation of China (LY17C040001) and Science & Technology Project of Taizhou (1402ky14) are acknowledged with thanks.

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